

Castlefields Primary School Computing Statement

Intent

At Castlefields we provide a high-quality computing education which equips pupils to use computational thinking and creativity to understand and change the world. The Computing Curriculum at Castlefields is fully inclusive to every child regardless of their learning needs. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

(The National Curriculum in England 2014, Purpose of Study)

The national curriculum for computing aims to ensure that all pupils:

- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.
- Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- Are responsible, competent, confident and creative users of information and communication technology.

At Castlefields Primary School we understand the importance of children experiencing and understanding ICT and computing to prepare them for the next stage of their lives and the wider world of tomorrow.

Implementation

It is vitally important that a high standard of teaching is implemented across each Key Stage, supported by skilled and enthusiastic staff. In order to ensure all staff are confident in the teaching of computing, the computing leader monitors subject knowledge and implements further training where required.

The whole school approach to computing consists of the Purple Mash computing scheme of work, supported by elements of the Rising Stars scheme of work, to ensure coverage of the Key Stage computing objectives.

EYFS – In the Early Years Curriculum the area of learning is Understanding The World – Technology. Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.

Key Stage 1 – In Key Stage 1 children:

- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.
- Create and debug simple programs.
- Use logical reasoning to predict the behaviour of simple programs.
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
- Recognise common uses of information technology beyond school.
- Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Key Stage 2 – In Key Stage 2 children:

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.
- Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration.
- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.
- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Impact

The approach at Castlefields Primary School results in a challenging and engaging computing curriculum that provides children with a foundation for the computing world of today and the future. Through a balanced curriculum, enthusiastic staff, monitoring of progress and progression, ICT Leaders, Digital Leaders and a Coding Club, children can experience ICT using a variety of applications and apply this knowledge and skills base across the curriculum.